This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-27: (Cancelled)

28. (Currently Amended): A method of screening for a compound that increases activity of ~~an~~ a human Sp1 or B segment-binding β_3-adrenergic receptor (β_3-AR) *trans*-activating factor in ~~human~~ mammalian cells, which method comprises:

(a) contacting mammalian cells capable of producing the Sp1 or B segment-binding β_3-AR *trans*-activating factor with a test compound; and

(b) detecting an increase in a level of activity of the Sp1 or B segment-binding β_3-AR *trans*-activating factor,

wherein the increase in the level of activity of the Sp1 or B segment-binding β_3-AR *trans*-activating factor results in an increase in the level of β_3-AR gene product relative to a level of expression prior to contact with the test compound.

29. (Currently Amended): A method of screening for a compound that increases activity of a human β_3-adrenergic receptor (β_3-AR) *trans*-activating factor in ~~human~~ mammalian cells, which method comprises:

(a) contacting mammalian cells capable of producing the β_3-AR *trans*-activating factor with a test compound; and

(b) detecting an increase in a level of activity of the β_3-AR *trans*-activating factor, wherein the increase in the level of activity of the β_3-AR *trans*-activating factor is detected by detecting an increase in the level of expression of a reporter gene operatively associated with an isolated nucleic acid having a nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) relative to a level of expression prior to contact with the test compound.

30. (Previously Presented): A method according to claim 28, wherein the increase in the level of activity of the β_3-AR *trans*-activating factor is detected by detecting an increase in the amount of β_3-AR *trans*-activating factor present in the cells after contacting them with the test compound relative to the amount present prior to contact with the test compound.

31. (Currently Amended): A method according to claim 28, wherein the cells do not endogenously express~~, or express at very low level,~~ β_3-AR.

32. (Original): A method according to claim 31, wherein the cells are selected from the group consisting of HeLa cells, CV-1 cells, and WAT cells.

33. (Currently Amended): A method of screening for a compound that inhibits activity of ~~an~~ a human Sp1 or B segment-binding β_3-adrenergic receptor (β_3-AR) *trans*-activating factor in ~~human~~ mammalian cells, which method comprises:

(a) contacting mammalian cells capable of producing the Sp1 or B segment-binding β_3-AR *trans*-activating factor with a test compound; and

(b) detecting a decrease in a level of activity of the Sp1 or B segment-binding β_3-AR *trans*-activating factor,

wherein the decrease in the level of activity of the Sp1 or B segment-binding β_3-AR *trans*-activating factor results in a decrease in the level of β_3-AR gene product relative to a level of expression prior to contact with the test compound.

34. (Currently Amended): A method of screening for a compound that inhibits activity of a human β_3-adrenergic receptor (β_3-AR) *trans*-activating factor in ~~human~~ mammalian cells, which method comprises:

(a) contacting mammalian cells capable of producing the β_3-AR *trans*-activating factor with a test compound; and

(b) detecting a decrease in a level of activity of the β_3-AR *trans*-activating factor,

wherein the decrease in the level of activity of the β_3-AR *trans*-activating factor is detected by detecting a decrease in the level of expression of a reporter gene operatively associated with an isolated nucleic acid having a nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) relative to a level of expression prior to contact with the test compound.

35. (Original): A method according to claim 33, wherein the decrease in the level of activity of the β_3-AR *trans*-activating factor is detected by detecting a decrease in the amount of β_3-AR *trans*-activating factor present in the cells after contacting them with the test compound relative to the amount present prior to contact with the test compound.

36. (Original): A method according to claim 33, wherein the cells endogenously express β_3-AR.

37. (Original): A method according to claim 36, wherein the cells are selected from the group consisting of neuroblastoma and BAT cells.

38. (Currently Amended): A method of screening for a compound that increases activity of a human β_3-adrenergic receptor (β_3-AR) *trans*-activating factor in ~~human~~ mammalian cells, which method comprises:

(a) contacting mammalian cells capable of producing the β_3-AR *trans*-activating factor with a test compound; and

(b) detecting an increase in a level of activity of the β_3-AR *trans*-activating factor, wherein the level of activity of the β_3-AR *trans*-activating factor is detected by an increase in the level of expression of a reporter gene operatively associated with an isolated nucleic acid selected from the group consisting of:

(i) about a 7 kb genomic DNA 5' flanking region of a β_3-AR transcription start site,

(ii) a deletion construct of a 7 kb genomic DNA located upstream of a β_3-AR transcription start site;

(iii) a nucleic acid comprising a nucleotide sequence that is greater than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) located 5' to an Sp-1 binding site relative to a transcription start site; and

(iv) a nucleic acid comprising a heterologous coding sequence operatively associated with a promoter and operatively associated with a nucleotide sequence that is greater than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) in proximity to an Sp-1 binding site, whereby expression of the heterologous protein is regulated in a tissue specific manner.

39. (Currently Amended): A method of screening for a compound that decreases activity of a human β_3-adrenergic receptor (β_3-AR) *trans*-activating factor in ~~human~~ mammalian cells, which method comprises:

(a) contacting mammalian cells capable of producing the β_3-AR *trans*-activating factor with a test compound; and

(b) detecting a decrease in a level of activity of the β_3-AR *trans*-activating factor, wherein the level of activity of the β_3-AR *trans*-activating factor is detected by a

decrease in the level of expression of a reporter gene operatively associated with an isolated nucleic acid selected from the group consisting of:

(i) about a 7 kb genomic DNA 5' flanking region of a β_3-AR transcription start site,

(ii) a deletion construct of a 7 kb genomic DNA located upstream of a β_3-AR transcription start site;

(iii) a nucleic acid comprising a nucleotide sequence that is greater than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) located 5' to an Sp-1 binding site relative to a transcription start site; and

(iv) a nucleic acid comprising a heterologous coding sequence operatively associated with a promoter and operatively associated with a nucleotide sequence that is greater than 80% identical to the nucleotide sequence GCCTCTGGGGAG (SEQ ID NO:1) in proximity to an Sp-1 binding site, whereby expression of the heterologous protein is regulated in a tissue specific manner.